CONSTRUCTION MANAGEMENT PLAN

SWAN HILL RURAL CITY COUNCIL

CONSTRUCTION OF THE TEN STEPS AND REINSTATEMENT OF RETAINING WALLS

PLAN NO. SHRCC-MP-08

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Distribution

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Revision history

Version	Issue Date	Description / summary of changes	Actions Taken to Notify of Changes	Approved by:
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1. INTRODUCTION

1.1. Plan Purpose

This plan details the construction management approach for the delivery of the Construction of the Ten Steps and Reinstatement of Retaining Walls Project to ensure all works are undertaken in accordance with contract requirements, legislative requirements, ISO9001 and Civil and Earth Australia (CEA) requirements. The plan covers the individual responsibilities to achieve the project objectives as set out by Swan Hill Rural City Council and the systems involved with achieving these requirements.

1.2. Plan Revision

The Project Manager will oversee the regular review of the Construction Management Plan (CMP) throughout the project. The CMP will be updated and revised to incorporate project changes. The following factors may prompt a revision of the plan.

- Client Feedback and comments
- Changes in the project delivery methodology
- Changes in scope or design
- Continuous improvement
- Changes to CEAs' processes or procedures
- Outcomes from Audit and Inspections

1.3. Plan Distribution

The Project Manager is responsible for the distribution of the CMP. It will be introduced to all staff and the general workforce in project inductions. The plan will be stored on DashPivot and is available to nominated project stakeholders upon request.

1.4. Plan Authorisation

The initial authorisation of the plan is the responsibility of the Project Manager. Authorisation of ongoing maintenance and revision versions of the plan is delegated to the Project Engineers.
The implementation of the CMP is under the authority of the Project Manager. All personnel employed on the Project will perform their duties in accordance with the requirements of the CMP, supporting management plans and related procedures.

1.5. Project Scope

This project, initiated by Swan Hill Rural City Council (Council), involves the replacement of the Ten Steps and the reinstatement of the retaining wall at Riverside Park in Swan Hill. The retaining wall, located on the north and south sides of the Ten Steps, will prevent further erosion and protect the substructure beneath. The new steps, reconstructed in their original location while maintaining the same design and aesthetic, will preserve the site's legacy. Additionally, there are two sections of beaching to be completed on the Little Murray River

Site Locations

Figure 1 – 10 Steps and Retaining Walls

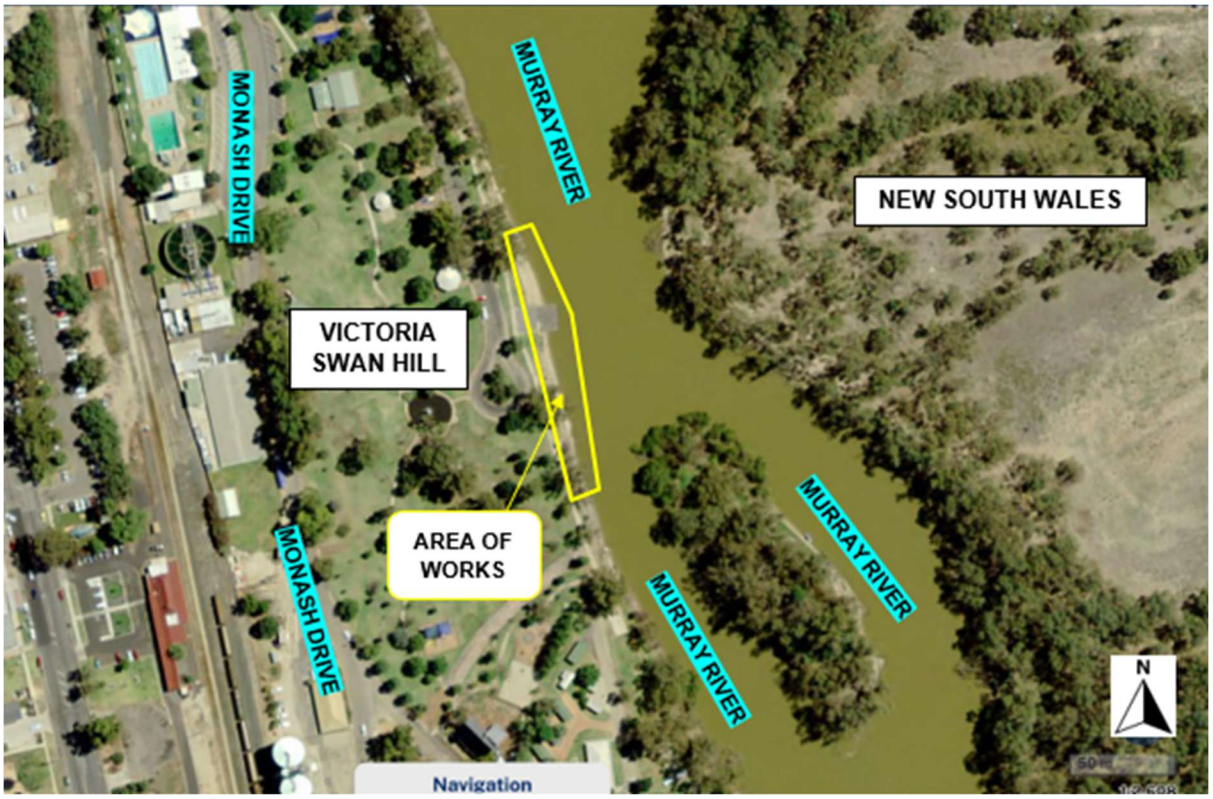
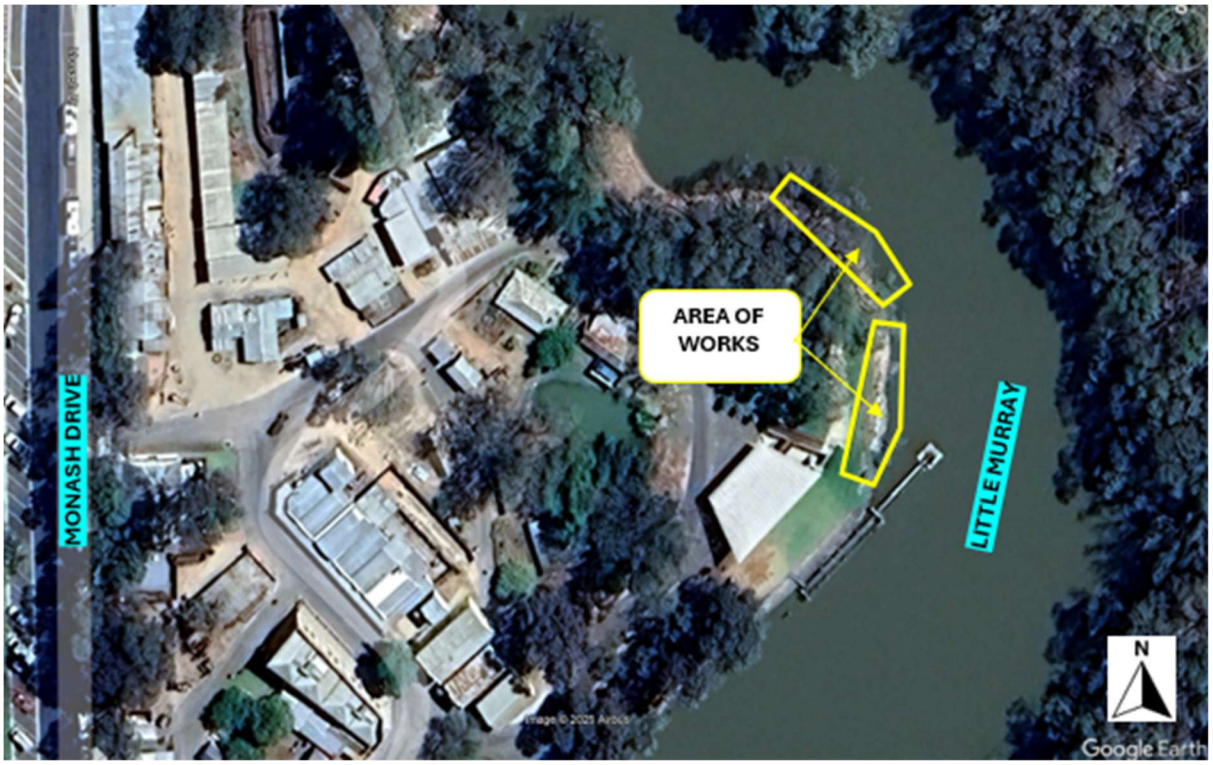
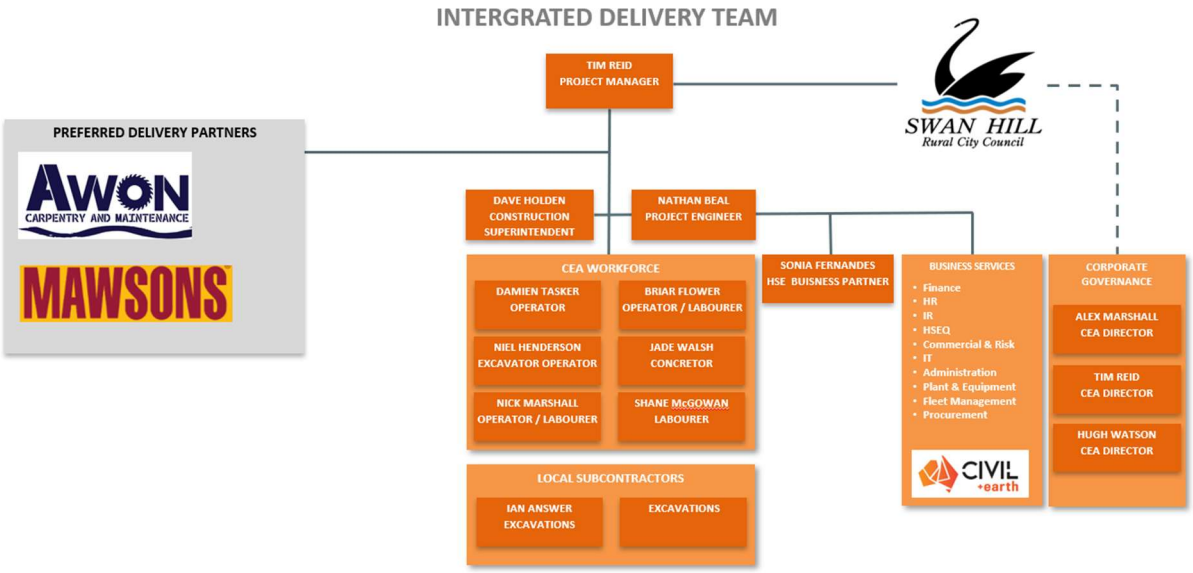


Figure 2 – Little Murray Beaching Works



2. ROLES AND RESPONSIBILITIES

The organization chart for the Project is shown below:



2.1. Project Manager

The Project Manager will:

- Provide assistance to the Project Manager in relation to the project approach.
- Provide project governance;
- Ensure all project systems are in place;
- Implementation of the management plans;
- Ensure adequate and competent resources are provided to support construction operations;
- Ensure construction is completed in accordance with this CMP, and
- Plan and monitor construction schedule for the project.

2.2. HSEQ Officer

The HSEQ Officer will be responsible for:

- Implementation of the Health and Safety Management Plan (HSMP);
- The communication of the WHSMP and WHS best practices to employees, sub-contractors and visitors;
- The timely induction of employees and sub-contractors;
- The timely delivery of training to employees and sub-contractors; and
- The timely execution of risk assessments, SWMS, audits and incident investigations.

2.3. Construction Superintendent / Supervisor

The Construction Superintendent / Supervisor will:

- Ensure the quality of work is completed in accordance with the Construction and Quality Management Plans;
- Ensure that all project systems are in place onsite and Subcontractors are performing site construction works as per CEA's minimum requirements as detailed in the project management plans;
- Ensure that all project procedures are followed correctly;
- Ensure that all Project Documentation is completed correctly on site and all safety measures are taken, and

3. Key Risks

The key tool used for tracking the project risks is the Project Risk Register. The Project Risk Register is maintained by the Project Manager and is available upon request. CEA have extracted the key construction risks from the Project Risk Register and included them below.

For the construction of the project the following key risks have been identified:

- **River Levels –** The works are to be completed along the Murray River and Little Murray River. Low river levels are critical to the completion of the works. A coffer dam is proposed for the completion of the 10 Steps. However, the retaining wall and beaching are reliant on a low river level to complete the works.
- **Procurement Risk –** Risks associated with the supply of Red Gum timber are critical for the project. To reduce this risk CEA has ordered the timber from a local supplier with a shorter lead time than rival products.
- **Service Location/Management –** Existing services are a known Risk. CEA will undertake DBYD, speak with SHRCC operations to assist with service locating prior to works commencing. Known services are located on construction drawings and pre-excavation checklist will be completed prior to commencement of excavation.
- **Plant Rollover –** There will be a heavy machinery working on the project and potential for plant rollover due to uneven ground. CEA will ensure that appropriate verifications of competency are undertaken. Furthermore, SWMS appropriate for the task shall be developed and implemented.
- **Work on Uneven and/or Unstable ground** – CEA will ensure appropriate checks and inspections will be put in place to mitigate risk associated with uneven and/or unstable ground. Inspections will also occur to assist with compliance with CEA procedures.
- **Pedestrian / Traffic Management** – CEA note that the works are being performed on active sites. As such, Traffic Management will be a risk to the works. CEA will develop a site specific Vehicle Movement Plan for the works. The plans will highlight vehicle only zones, shared zones and people only zones.

4. PROJECT DELIVERY PROGRAM

Time will be managed throughout the project as outlined in the Project Management Plan. This outlines the processes that will be used to develop, update and monitor the Project Schedule.

The project schedule is included within the Project Management Plan, refer Appendix J - Project Schedule. This baseline shall only be revised upon a formal change; the project scope or extension of time and shall align with contract obligations regarding key milestone and completion dates.

5. KEY PERSONNEL

Company	Role	Name	Contact
SHRCC	Principal Engineer	Nathan Kamalan	0350 362 394
CEA	Construction Supervisor	Dave Holden	0437 494 181
CEA	Project Manager	Tim Reid	0408 335 175
CEA	Project Engineer	Nathan Beal	0417 886 713

6. CONSTRUCTION METHODOLOGY

6.1. Preliminaries

Prior to commencement of construction activities, the following preliminary works shall be completed:

- Ensure work area is safe;
- Conduct all necessary Quality/Safety/Environment and Traffic Management plans and execute, including inductions;
- Set up site container and site facilities
- Traffic Management
- Conduct dilapidation reports
- Transport materials and equipment to site
- Development and approval of project documentation such as SWMS and ITPs.

The supervisor allocated access to the DashPivot file prior to commencing works. The DashPivot file will contain all necessary documentation and information required for the package of works they will be undertaking. The file will include but not be limited to the following:

- Site Emergency Plan (CEAMS-0000-HS-TM-009);
- SafeWork information sheet;
- CEA Policies & Procedures;
- Safe Work Method Statements (SWMS);
- Vehicle Movement Plan (VMP);
- Applicable permits and checklists (Overhead Power/ Hot works/ Working from heights);
- Applicable registers (plant and Equipment/Lifting Gear/ Electrical Equipment);
- Quality Documentation
    - ITPs, Work Method Statements, and
    - Drawings.

6.2. Beaching Works

All works will be sequenced as per CEAs detailed program, the following section outlines major construction points and the general methodology employed.

6.2.1. Silt Boom Installation

The installation of the silt boom must be completed prior to works commencing in the river. This will be completed in accordance with the sediment and erosion control plan.

The silt boom will be connected and spread on the bank ready for pulling into the river. Once laid out, the chain on the silt boom will be extended into the river.

6.2.2. Rock Deliveries

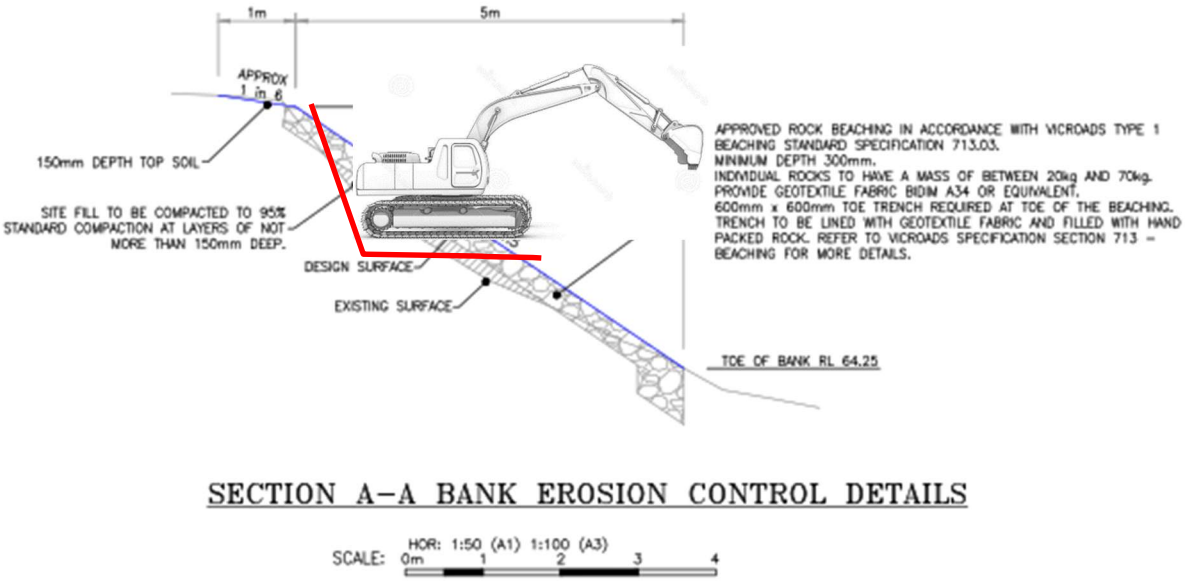
It is intended that all material be delivered directly to site from the quarry. This may be completed by Civil and Earth or by Mawsons Trucks. Where possible, deliveries will be completed using truck and dogs. Otherwise, rigid trucks only will deliver the material. Placement of rock will be assessed on site as the construction commences.

6.2.3. Methodology

Where required, CEA will excavate and construct an access ramp down to the batter slope. The ramp will provide access to the works for the excavator(s). Once the access ramp is constructed into the riverbank, shaping of bank profile, including stripping of topsoil and removal of loose material will be completed, as required.

At the water level of the new ramp, a ledge will be created by cutting into the bank per Figure 1 or by installing beaching rock into the river to create a base for the excavator(s) to sit upon (refer Figure 6). The rock form part of the permanent works.

Figure 1 - Ramp created by cutting into bank

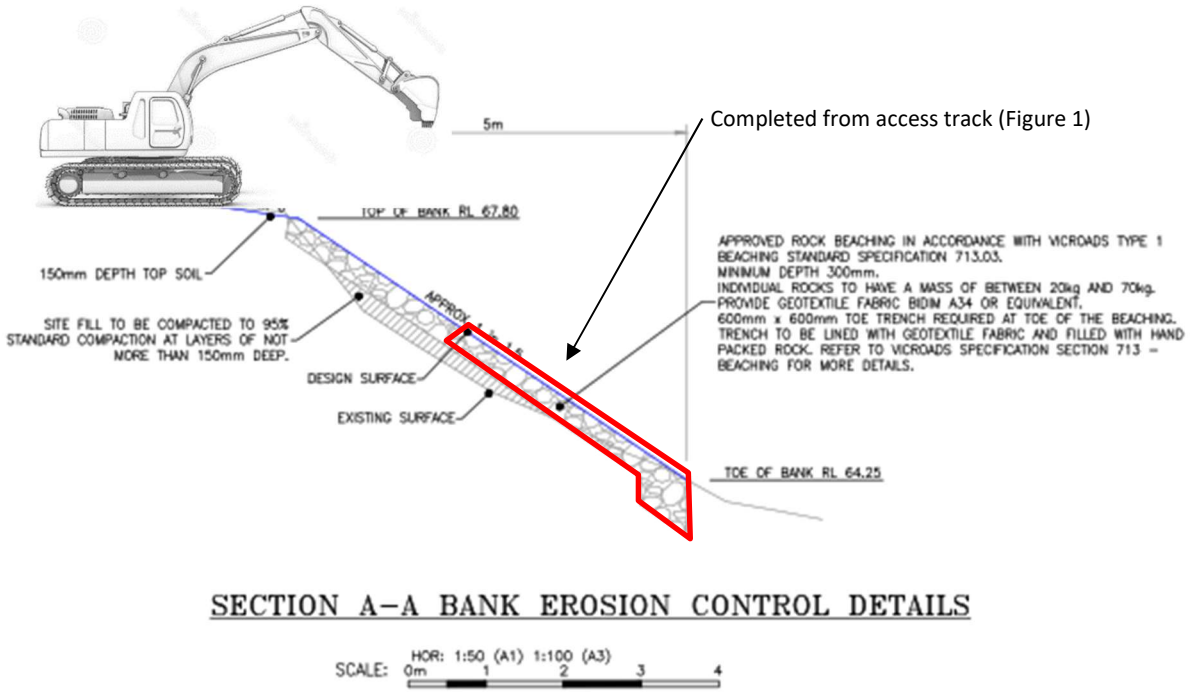


Where CEA cut into the existing bank, this will be reinstated progressively as the excavators work backwards towards the ramps. The material will be conditioned and compacted using wheel rollers on excavators. Where required, CEA may conduct compaction testing to confirm reinstatement. Rock will then be placed over the access track as the

excavator works its way out.

Beaching works will the continue from the top of the riverbank, where the excavator can reach to the previously completed beaching. This is shown in Figure 2 below.

Figure 2 – Excavator from top of bank



6.3. Retaining Walls

All works will be sequenced as per CEAs detailed program, the following section outlines major construction points and the general methodology employed.

6.3.1. Silt Boom Installation

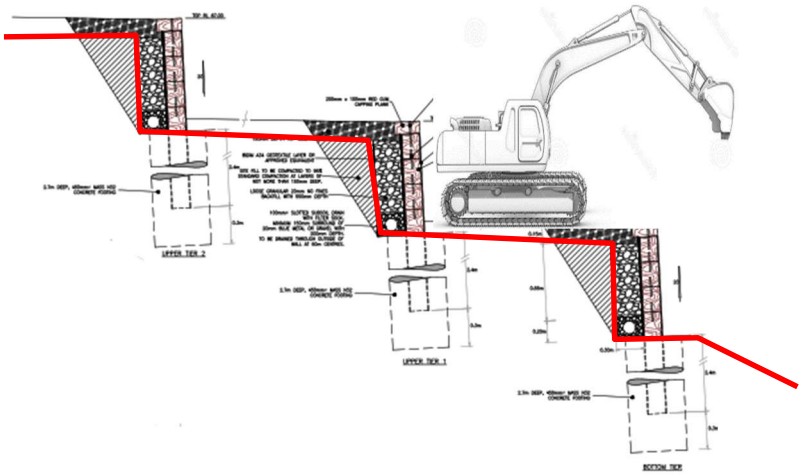
The installation of the silt boom must be completed prior to works commencing in the river. This will be completed in accordance with the sediment and erosion control plan.

The silt boom will be connected and spread on the bank ready for pulling into the river. Once laid out, the chain on the silt boom will be extended into the river.

6.3.2. Methodology

Once mobilised to site, Civil and Earth will focus on commencing the initial earthworks for the construction of the retaining walls. The excavator will be used to cut and backfill to create the initial profile for the retaining wall. The excavator will the commence boring of the post holes to commence installation of the steel soldiers.

Figure 3 – Excavator from top of bank



Once the holes have been augured, Civil and Earth will setup and install the PFC's/UC's in accordance with the detailed design. The posts will be supported in position using timbers before being concreted into position. Generally, these will be completed in batches of 10 or more posts using a concrete pump.

Once the posts have been concreted into position and cured the sleepers will be installed, followed by the geofabric, agi-drain and course rock. The figures below provide examples of this work being completed.

Figure 4 – 150 UC Installation

Figure 5 – Agi-drain Installation

Figure 6 – Installation of Rock

Figure 7 – Finished Wall

The coarse rock will then be covered with geofabric, before being covered with topsoil material. Additional landscaping or furnishing can then be completed once the wall has been completed.

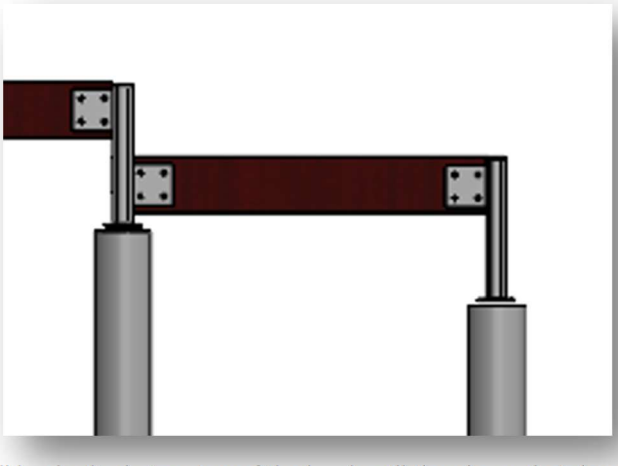
6.4. 10 Steps Construction

The initial step will be to demolish the existing structure. Civil and Earth will provide access for SHRCC to remove any boards/timbers they would like to keep. The removal of the 10 Steps will be completed using an excavator from the top of the bank. The timber will not be removed piece by piece for reuse/recycling. The existing concrete piles will then be removed using an excavator from the bank. The concrete piles will be removed from site and taken to a concrete recycling facility.

A sheet pile coffer dam will then be installed using a 20T excavator with an EMV attachment. The coffer dam will be dewatered by pumping the water around the coffer dam and back into the river, behind the silt curtains. This allows sediment to settle behind the curtain.

Figure 8 – Sheet Pile Installation

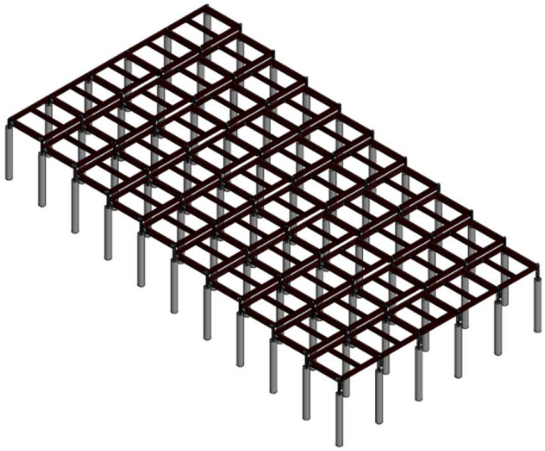
Figure 9 – Post Installation



Once the coffer dam has been dewatered, the area will be desilted. A review of the levels will then be undertaken to confirm whether any material is required to be imported to raise the level of the riverbank beneath the structure. An excavator will then be used to auger the piles to depth. DN300 Roladuct casing will be used prevent collapse of the piles close to the river. The Roladuct will be brought above ground to and cut the finished height of the piers. Using a concrete pump the piers will be filled in batches of 10 or more. Line and level of the piers will be check progressively by a surveyor.

The galvanised posts will then be installed on top of the concrete piers. Jacking nuts will be installed beneath the posts to allow for vertical adjustment as required. Once the posts have been installed, Civil and Earth will commence the installation of the bearers and joists. These will be installed focusing on the bottom 3 or 4 steps to allow for early removal of the coffer dam. Once the subframe has been installed, the decking timbers will be installed. This will be repeated until the steps are completed.

Figure 10 – Post Installation



Once the timber work has been completed, Civil and Earth will complete the installation of the gabion baskets. This will be completed in accordance with the manufacturer's instructions.

The coffer dam will be removed from the riverbank using a 20T excavator with an EMV attachment. Prior to removal, an inspection will be completed on the below water elements of the project. Works will then continue the above water elements.

6.5. Deliveries, Handling and Storage

It is intended that all material be delivered directly to sites and stored near the work site location. Appropriate measures will be implemented to ensure that the unloading, storing and handling of the deliveries is managed in the safest way possible by the CEA supervisors. Where practicable a forklift/telehandler will be used for unloading of materials.

6.6. Pedestrian & Traffic Management

All traffic management will be completed using the site Vehicle Movement Plan (VMP). SHRCC has informed Civil and Earth that the access road can be closed to public traffic. A single road closed sign will be installed and temporary fencing will block the access road.

Civil and Earth will block pedestrian access through the site using temporary fencing. Alternate access paths will be provided to provide access around the work site.

Please refer to the Vehicle Movement Plan (VMP).

6.7. Main Office

The established CEA office in Echuca will be used for all off-site support services, a ‘home-base’ for the project team and can be used for a warehousing area for higher risk items such as switch boards and valves.

Project management staff will work from the Echuca office for the duration of the project and attend site as required. A site supervisor will be on site when required.

6.8. Site Offices and Compounds

Once mobilised to site, a site office and amenities will be established. The site supervisor will be based in this office for most of the construction phase of the project.

The project site office will be located at the sites in accordance with the Site Plans.

6.9. Resources

A combination of self-perform resources and subcontractor resources will be used to complete the works. CEA will closely manage and supervise both the self-perform crews and subcontractors engaged to ensure they work to CEA procedures, schedule and safety requirements.

The construction crew will likely be made up of the following resources. However, this may change as required.

Beaching Works

- 20T Excavator
- 14T Excavator
- Labourer
- Tip Truck

Retaining Wall Works

- 20T Excavator
- 14T Excavator
- 5T Excavator
- 1.7T Excavator
- 3 x Labourer
- Tip Truck

10 Steps

- 20T Excavator
- 5T Excavator
- 3 x Labourer
- Tip Truck
- Telehandler

The supervisors are required to ensure work crews comply with the project safety, environmental, quality, technical and schedule requirements. It will be the Supervisors responsibility to ensure that all internal and external hold points are adhered to and signed off before the next task can be started.

Supervisors will provide notification for inspection points on ITP's and will also undertake pre-starts with crew members on site for each crew ensuring all work crews have the necessary documentation for their works.

6.10. Working Hours

Site working hours will be from:

- 7:00AM to 5:30PM - Monday to Friday
- Saturday – by agreement with the Superintendent
- Sunday - by agreement with the Superintendent

If working hours need to extend beyond this, it shall only be with prior approval from the Client Superintendent.

7. SHRCC INVOLVEMENT

Throughout the construction program SHRCC will be regularly updated on the construction progress through progress meetings. Furthermore, SHRCC representatives will be required to attend site to sign off witness points and hold points on the ITP's.

Monthly meetings will be conducted throughout the construction program and include the following topics:

- Work Health & Safety
- Environment & Cultural Heritage
- Quality
    - Requests for Information

- Punch list, defect list, errors/omissions
- Schedule
  - Work completed in the past month
  - Work planned for the coming month
  - Progress against project works schedule
- Finance
  - Payment claims and variations
- Other issues

8. COMPLETION AND HANDOVER

8.1.1. Punch list

CEA will undertake a joint punch walk with SHRCC prior to handover of site, to ensure the works are completed to the required standard. This will happen progressively throughout the works as each component is completed. Once the punch list items are complete, CEA will again invite SHRCC to attend to sign off the punch items.

8.1.2. As-Constructed Information

Work As Constructed drawings shall be submitted to Swan Hill Rural City Council for review and approval following completion of construction works. The submission of As Constructed information shall be in accordance with the agreed tender qualifications.

8.2. Site Demobilisation

Upon completion of the site works, CEA will commence demobilisation from the site. This will include but not be limited to;

- Completion of site dilapidation reporting;
- Removal of signage and traffic management, as required;
- Removal of site delineation;
- Removal of temporary fencing;
- Completion of permit approvals;
- De-mobilisation of plant and equipment;
- Removal of site offices and amenities.

9. ATTACHMENT 1 – INSPECTION TEST PLANS

DOCUMENT NUMBER	NAME
SHRCC-ITP-01	Site Mobilisation
SHRCC -ITP-02	Retaining Wall

SHRCC -ITP-03	Rock Beaching
SHRCC -ITP-04	10 Steps - Pier Installation
SHRCC -ITP-05	10 Steps - Pier Installation
SHRCC -ITP-06	10 Steps – Gabion Basket Installation

APPENDIX A – Construction Management Plan Induction Form

NAME	COMPANY	DATE	SIGNATURE

Vehicle Movement Plan (VMP)

10 Steps and Retaining Wall Renewal Project

Swan Hill Rural City Council

Entry/Exit Points ☒	People Only Zones ☒	Plant Only Zones ☒	Shared Zones ☒	Vehicle Parking ☒	First Aid ☒	Fire Extinguishers ☒	Spill Kits ☒	Overhead Services ☒	Evacuation Points ☒

Notes:

1. As required, erect temporary barriers to protect assets: Trees, pits, pipes, etc.
2. Site survey to confirm the location of the vegetation protection zones. Flagging to be erected to prevent unauthorised access.

REVISION DATE	7/05/2025	REVISION NO.	B	DRAWN BY	TIM REID	POSITION	PROJECT MANAGER

Vehicle Movement Plan (VMP)

10 Steps and Retaining Wall Renewal Project

Swan Hill Rural City Council

Entry/Exit Points ☒	People Only Zones ☐	Plant Only Zones ☐	Shared Zones ☐	Vehicle Parking ☐	First Aid ☐	Fire Extinguishers ☐	Spill Kits ☐	Overhead Services ☐	Evacuation Points ☐

Notes:

1. As required, erect temporary barriers to protect assets: Trees, pits, pipes, etc.
2. Erect delineation or advisory signs when moving materials through the material movement zone
3. CEA to coordinate deliveries on site with a minimum of 24 hours' notice, where possible.

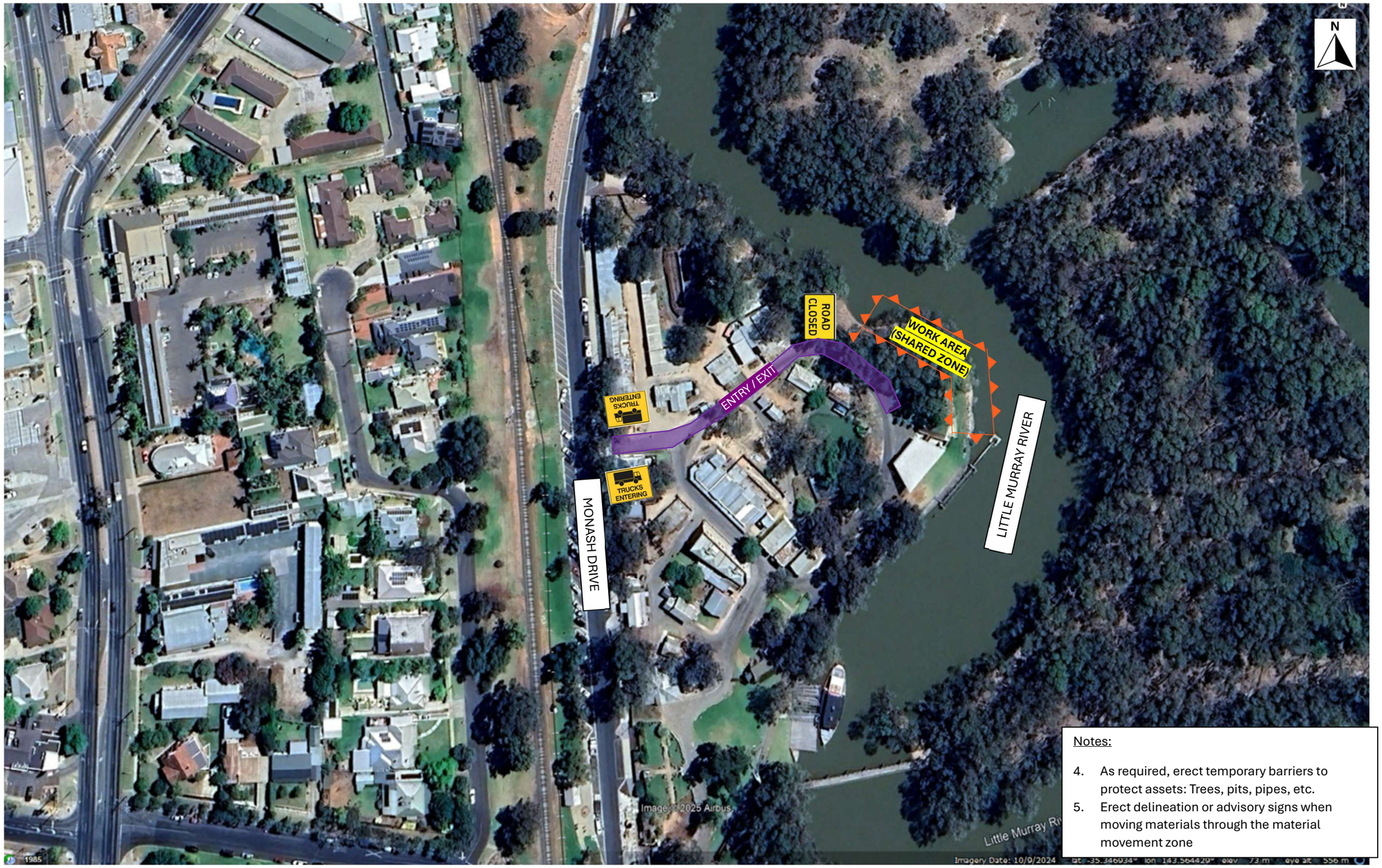
REVISION DATE	16/04/2025	REVISION NO.	A	DRAWN BY	TIM REID	POSITION	PROJECT MANAGER

Vehicle Movement Plan (VMP)

10 Steps and Retaining Wall Renewal Project

Swan Hill Rural City Council

Entry/Exit Points ☒	People Only Zones ☐	Plant Only Zones ☐	Shared Zones ☐	Vehicle Parking ☐	First Aid ☐	Fire Extinguishers ☐	Spill Kits ☐	Overhead Services ☐	Evacuation Points ☐



Notes:

4. As required, erect temporary barriers to protect assets: Trees, pits, pipes, etc.
5. Erect delineation or advisory signs when moving materials through the material movement zone

REVISION DATE	16/04/2025	REVISION NO.	A	DRAWN BY	TIM REID	POSITION	PROJECT MANAGER